Amendment to the Claims:

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-37. Cancelled (Without disclaimer or prejudice)

38. (New) A system for multicasting messages to a plurality of receiving network processors in a network, comprising:

a MDP database table comprising a plurality of parameters used to manage transmission by at least one transmitting network processor in the network and reception of multicast messages in the network by a plurality of the receiving network processors;

a MDP initialization module associated with the at least one transmitting network processor which reads a plurality of parameters from the MDP transmission database table to initialize a MDP transmission session by the at least one transmitting network processor utilizing the plurality of parameters;

a MDP initialization module associated with each of a plurality of receiving network processors which reads a plurality of parameters from the MDP database table to initialize a MDP receiving session by the plurality of receiving network processors utilizing the parameters;

a MDP operations module associated with the at least one transmitting network processor which receives requests to transmit messages, creates a MDP information

packet for each message, and transmits each message to each of the plurality of receiving network processors designated in the MDP information packet; and

a MDP operations module associated with each of the plurality of receiving network processors which receives messages transmitted by the MDP operations module associated with the at least one transmitting network processor, and transmits the messages which are received to a higher level software application.

39. (New) The system recited in claim 38, wherein:

the MDP initialization module of the at least one transmitting processor activates GRTT probing upon initial activation, wherein GRTT probing is a periodic sending of messages to the plurality of receiving network processors in the network and measures a time required to receive a response.

A4

40. (New) The system recited in claim 39, wherein:

the plurality of parameters read by the MDP initialization module of the at least one transmitting processor comprise an initial GRTT value, a maximum GRTT value, a GRTT probe minimum interval value, and a GRTT probe maximum interval value.

41. (New) The system recited in claim 40, wherein the MDP operations module of the at least one transmitting network processor comprises:

means for generating a GRTT probe in order to measure a greatest round-trip time between the at least one transmitting network processor and updating the GRTT initial value stored in the MDP database table.

42. (New) The system recited in claim 41, wherein:

the GRTT probe is periodically transmitted to each of the plurality of receiving network processors starting at the GRTT probe minimum interval value and increasing an interval between transmissions of the GRTT probe until the interval equals the GRTT probe maximum interval value.

43. (New) The system recited in claim 38, wherein:

the plurality of parameters read by the MDP initialization module of the at least one transmitting network processor comprise an initial GRTT value, a recovery cycle, a compensation factor, a block size, and a segment size.

44. (New) The system recited in claim 43, wherein:

the MDP operations module of the at least one transmitting network processor computes a squelch time of the at least one transmitting network processor based on the recovery cycle, the initial GRTT value, the compensation factor, the block size, and a segment size.

45. (New) The system recited in claim 44, wherein:

the MDP operations module of the at least one transmitting network processor de-queues a message when the squelch time expires.

46. (New) The system recited in claim 42, wherein the MDP operations module of the at least one transmitting network processor comprises:

means for computing a squelch time; and

means for stopping GRTT probing and de-queuing a message when the squelch time expires.

47. (New) The system recited in claim 38, wherein:

the MDP initialization module of the plurality of receiving network processors reads a stream integrity value and a nacking mode value from the MDP database table.

48. (New) The system recited in claim 47, wherein:

the MDP operations module of the plurality of receiving network processors sends a negative acknowledgment only upon receipt of an MDP information packet when a field in the MDP information packet indicates that the receiving network processor on which the MDP client operations module executes is an info client.

49. (New) The system recited in claim 48, wherein:

the MDP operations module of the plurality of receiving network processors sends a negative acknowledgment when a message is received with missing elements when the MDP information packet designates the receiving network processor on which the MDP operations module executes is an action client.

50. (New) The system recited in claim 49, wherein:

the MDP operations module of the plurality of receiving network processors computes a message delay time based upon a message size and a maximum transmission rate and waits for a period time equal to the message delay time upon receipt of an MDP information packet.

51. (New) The system recited in claim 50, wherein the MDP operations module of the plurality of receiving network processors further comprises:

means to compute a squelch time; and

means to terminate reception of a message when the squelch time has expired.

52. (New) A computer program, executable by a computer, embodied on a computer readable medium for multicasting messages to a plurality of receiving network processors in a network, comprising:

a MDP database table comprising a plurality of parameters used to manage transmission by at least one transmitting network processor in the network and reception of multicast messages in the network by a plurality of the receiving network processors;

a MDP initialization module associated with the at least one transmitting network processor which reads a plurality of parameters from the MDP transmission database table to initialize a MDP transmission session by the at least one transmitting network processor utilizing the plurality of parameters;

a MDP initialization module associated with each of a plurality of receiving network processors which reads a plurality of parameters from the MDP database table to initialize a MDP receiving session by the plurality of receiving network processors utilizing the parameters;

a MDP operations module associated with the at least one transmitting network processor which receives requests to transmit messages, creates a MDP information packet for each message, and transmits each message to each of the plurality of receiving network processors designated in the MDP information packet; and

a MDP operations module associated with each of the plurality of receiving network processors which receives messages transmitted by the MDP operations module associated with the at least one transmitting network processor, and transmits the messages which are received to a higher level software application.

53. (New) The computer program recited in claim 52, wherein:

the MDP initialization module of the at least one transmitting processor activates GRTT probing upon initial activation, wherein GRTT probing is a periodic sending of messages to the plurality of the receiving network processors in the network and measuring a time required to receive a response.

54. (New) The computer program recited in claim 53, wherein:

the plurality of parameters read by the MDP initialization module of the at least one transmitting processor comprise an initial GRTT value, a maximum GRTT value, a GRTT probe minimum interval value, and a GRTT probe maximum interval value.

55. (New) The computer program recited in claim 54, wherein:

the MDP operations module of the at least one transmitting processor comprises means for generating a GRTT probe in order to measure a greatest round-trip time between the at least one transmitting network processor and updating the GRTT initial value stored in the MDP database table.

56. (New) The computer program recited in claim 55, wherein:

the GRTT probe is periodically transmitted to each of the plurality of receiving network processors starting at the GRTT probe minimum interval value and increasing an interval between transmissions of the GRTT probe until the interval equals the GRTT probe maximum interval value.

57. (New) The computer program recited in claim 52, wherein:

the plurality of parameters read by the MDP initialization module of the at least one transmitting processor comprise an initial GRTT value, a recovery cycle, a compensation factor, a block size, and a segment size.

58. (New) The computer program recited in claim 57, wherein:

the MDP operations module of the at least one transmitting processor computes a squelch time of the at least one transmitting network processor based on the recovery cycle, the initial GRTT value, the compensation factor, the block size, and a segment size.

59. (New) The computer program recited in claim 58, wherein:

the MDP operations module of the at least one transmitting processor de-queues a message when the squelch time expires.

60. (New) The computer program recited in claim 56, wherein the MDP operations module of the at least one transmitting processor comprises:

means for computing a squelch time; and

means for stopping GRTT probing and de-queuing a message when the server squelch time expires.

61. (New) The computer program recited in claim 52, wherein:

the MDP initialization module of the plurality of receiving network processors reads a stream integrity value and a nacking mode value from the MDP database table.

62. (New) The computer program recited in claim 61, wherein:

the MDP operations module of the plurality of receiving network processors sends a negative acknowledgment only upon receipt of an MDP information packet when a field in the MDP information packet indicates that the receiving network processor on which the MDP operations module executes is an info client.

A4

63. (New) The computer program recited in claim 62, wherein:

the MDP operations of the plurality of receiving network processors module sends a negative acknowledgment when a message is received with missing elements when the MDP information packet designates the receiving network processor on which the MDP operations module executes is an action client.

64. (New) The computer program recited in claim 63, wherein:

the MDP operations module of the plurality of receiving network processors computes a message delay time based upon a message size and a maximum transmission rate and waits for a time period equal to the message delay time upon receipt of an MDP information packet.

65. (New) The computer program recited in claim 64, wherein the plurality of receiving network processors comprises:

means to compute a squelch time; and

means to terminate reception of a message when the squelch time has expired.

66. (New) A method which transmits multicast messages from at least one transmitting network processor to a plurality of receiving network processors in a network, comprising:

the at least one transmitting network processor reading a plurality of parameters from a MDP database which initializes and controls the transmission of a multicast message by the at least one transmitting network processor;

a plurality of the plurality of the receiving network processors reading a plurality of parameters from a MDP database which initializes and controls reception of the multicast message by the plurality of the receiving network processors which read the plurality of parameters;

transmitting the multicast message from the at least one network transmitting processor to the plurality of receiving network processors which read the plurality of parameters when a message delay time does not exceed a time computed to transmit the multicast message or the message delay time does not exceed a perishability time contained within the multicast message; and

transmitting a negative acknowledgment to the at least one of the transmitting network processor when at least one receiving network processor determines that data

in the multicast message is missing and when the at least one of the receiving network processor which read the parameters was designated as an action entity within a field contained within the MDP information packet.

67. (New) The method recited in claim 64, wherein:

when transmitting the multicast message to the plurality of receiving network processors, a GRTT probe is also transmitted periodically to the plurality of receiving network processors which read the parameters in order to determine a greatest round-trip time required for a message to be received by the plurality of receiving network processors which read the parameters and an acknowledgment to be sent back to the at least transmitting network processor.

68. (New) The method recited in claim 41, wherein when the greatest round trip time is determined, the method further comprises:

adjusting the plurality of parameters stored in the MDP database based upon the greatest round-trip time.

69. (New) The method recited in claim 67, comprising:

the at least one transmitting network processor calculates a squelch time based upon the parameters retrieved from the MDP database; and

the squelch time is set equal to the perishability time by the at least one transmitting network processor when the squelch time exceeds the perishability time.

70. (New) The method recited in claim 69, comprising:

the at least one transmitting network processor monitors for negative acknowledgments, transmitted by the plurality of receiving network processors which read the parameters, to be received when the squelch time has not been exceeded.

71. (New) The method recited in claim 70, comprising:

retransmitting a portion of the multicast message when a negative acknowledgment is received from at least one receiving network processor when all data in the multicast message has not been received and a squelch time has not been exceeded.

72. (New) The method recited in claim 71, comprising:

computing a squelch time based upon the plurality of parameters stored in the MDP database; and

transmitting a negative acknowledgment when a portion of the multicast message has not been received by at least one of the receiving network processors and the squelch time has not been exceeded.

73. (New) The method recited in claim 72, wherein:

transmitting a negative acknowledgment when a portion of the multicast message has not been received by at least one of the receiving network processors occurring only when the at least one of the receiving network processors has been designated as an action receiving network entity in the MDP information packet.

74. (New) The method recited in claim 73, wherein:

A4

the squelch time is computed as equal to $N*T_{rc}*B*F_C$, where T_{rc} is 5*GRTT, N is a recovery cycles, $F_{C\ is}$ a compensation factor, and B is a block size based on a number of blocks in the message times a segment size.